GPS Watch Tracker

User Manual

V6.2

WT200A

ASCEND GROUP CO.,LTD

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1. Product Overview

Thank you for your purchase of WT200A personal GPS Tracker.The WT200A GPS/GSM Tracker is a personal remote position device with build-in GPS and GSM/GPRS modules. It is a small size, high accuracy remote location tracking device. Based on GPS satellite, it provides accurate position information under dynamic conditions.

Function List:

- Real time tracking via SMS or GPRS
- Track on demand
- Track by time interval
- SOS panic button
- Geo-fencing control
- Two way voice communication

Applications:

WT200A GPS/GSM personal tracker can be used for people, asset, and pet. The devices built in antenna, integrative machine and easy to assemble.

For your safety:

In order to realize the full functions of this product, please read this manual carefully before starting to use the product.

1.	This product can only be maintained and repaired by qualified professional service personnel. If you detach this product for maintenance or repair, your warranty will be invalidated.
2.	When connecting the other devices, read carefully their instruction manuals, so as to carry out correct installation; do not connect incompatible device.
3.	Please use genuine original parts and qualified batteries and peripheral equipments, so as to avoid damage to this product.
4.	As this product is a high-tech product, please read carefully this manual before starting to use the product, so as to avoid inappropriate operation.
5.	Drivers should not operate this product while driving a vehicle, thereby, affecting safe driving.
6.	This product can work properly only when GSM communication is in good condition.
7.	Please reduce electromagnetic wave interference to the product; and use it properly.
8.	GPS communication is liable to be affected by environmental shielding; may fail to carry out positioning during certain circumstances. It will resume the positioning function as soon as it leaves the shielding environment. This is normal. Please do not worry when encountering such problem.
9.	Each signal sent out from the system will be confirmed for successful transmission in the base station of the mobile operator. However, if system stoppage occurs or if the mobile telephone is preset to a switch off state by the customer, it cannot ensure successful transmission.
10.	For safety reason, do not tell the other people your WT200A mobile number, without taking precautions. Otherwise, your privacy may be compromised along with other safety problem.

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2. Specification

GSM module	MTK6223D, GSM 900/1800/850/1900 quad-band Support the TCP protocol
GPS Chipset	JRC G591
GPS sensitivity	-159dBm
C/A Code	1.023MHz chip rate
Channels	20 channel all-in-view tracking
GPS frequency	L1,1575.42MHz
GPS Position Accuracy	10 meters, 2D RMS
Velocity Accuracy	0.1m/s
Time Accuracy	1 us synchronized to GPS time
Datum	WGS-84
Hot Start	1sec.,average
Warm Start	38sec.,average
Cold Start	42sec.,average
Altitude Limit	18,000 meters (60,000feet) max.
Velocity Limit	515 meters/second (1000knots) max.
Acceleration Limit	Less than 4g
Operating temperature	-20°C－70°C
Humidity	5%To 95% Non-condensing
Dimension	61.8mmx41mmx18mm
Voltage	500 mAh rechargeable battery(3.7V)
Charger	DC5V

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3. Installation

3.1. Product Parts List

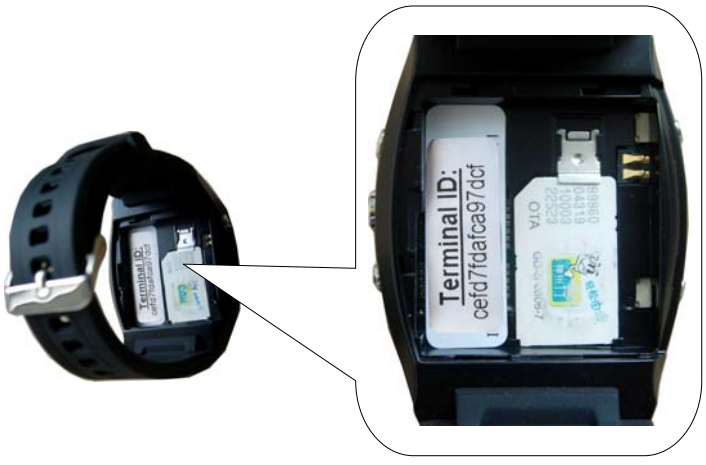
GPS Tracker Unit	
SOS Button and Socket cables	
Battery	
User Manual(CD)	

3.2. Precaution before Installation

1	Check if all the parts are included.
2	Prepare a SIM card for GSM communication. Use some other mobile phone to confirm that the PIN code has not been set and that it can dial out and receive telephone calls and SMS without problem.
3	Before install the SIM card; make sure to cut off power from the GPS Tracker unit. The correct installation method is to push the tray completely into the GPS Tracker unit, until you feel it is hooked by something.
4	Put the GPS Tracker outdoors
5	We don't provide the SIM card

3.3. INSTALLATION

3.3.1 Step 1: Install SIM Card

1	Remove the back cover of WT200A. Insert the SIM card by sliding it into the card slot. 

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	Put back the back cover.
2	Make sure to turn off the power before install the SIM card.
3	Make sure to deactivate the PIN code, so that the SIM card can operate without PIN protection.
4	Before install the SIM card to the GPS Tracker, please use a mobile phone to make sure the SIM card can make & receive phone calls without problem.
5	Before install the SIM card to the GPS Tracker, please use a mobile phone to empty the SMS storage of the SIM card.

3.3.2 Functional Parts：

3.3.3 Button Function Description:

Button	Meaning
A	1.Press and hold 3seconds to turn on / turn off GPS tracker 2.Hang up incoming call
B	Microphone
C	Charging Jack
D	1. Interface Switch: 2. Press button D for 3 seconds, you can set date/language: Then press E or F to set

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	Press G to confirm OK Press D to back to previous menu
E	1.Press button E for 3 seconds to call the first preset phone number(Please refer to **4.SMS Command List Authorization)** 2. During a call, you can press button E to up the volumn.
F	1. Press the Button F(right middle button), It will call the phone number 1 first, if phone number 1 cannot get through, or phone number 1 hang up the phone; the gps tracker will call the phone number2, if phone number 2 an not get through, or phone number 2 hang up the phone; the gps tracker will call the phone number 3. **(on SMS P2P mode)**Then the gps tracker will send sos alert message to the authorized phone number in (**4.SMS Command List Authorization);If on GPRS mode,the gps tracker will upload SOS alarm to 800D** 2. During a call, you can press button E to down the volumn.
G	Press button G for 3 seconds to call the second preset phone number(Please refer to **4.SMS Command List Authorization)**
H	Speaker

3.4 Charge battery:

- **The initial use of WT200A, make sure you please turn off WT200A and charge WT200A battery for 12 hours.**
- **Below is the battery charging status icon on the GPS watch screen:**

Charging:

Charging Finished:

If the GPS tracker is turned off when charging:

If the GPS tracker is turned on when charging:

The battery icon on the screen right top will be full.

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4. SMS Command List

Note: **** is GPS tracker user password and the default password is 0000. The tracker will only accept commands from a user with the correct password. Commands with wrong password will be ignored.

Description	SMS Command	Example
Authorization	*Authorized phone number* user password (default 0000) *location number (1 or 2 or 3) **	*008613900000000*0000*1**(To set the first authorized phone number) *008613800000000*0000*2**(To set the second authorized phone number) *008613500000000*0000*3**(To set the third authorized phone number)
Remarks: To authorize phone numbers for receiving location reports or SMS alarms or phone calls. (1) Receiving SOS alert message: After press SOS button, WT200A will send sms alert and location coordinates to the first authorize phone number. (2) Receiving Geo fence alert message: when the WT200A is in or out of the preset square, WT200A will send send sms alert and location coordinates to the first authorize phone number.		
Set Time Zone (Default:E0)	896****DNN	8960000E08
Remarks: This command is used for correct time into your local time D=E/W, E means East Longitude, ahead of GTM time, W means West Longitude, behind GMT time. NN is your time zone. For example, China is in East Longtitude, GTM+8 time zone. Then we send 8960000E08		
Change GPS Tracker user Password	777+New Password+Old Password	77712340000
Remarks: The password will be changed from 0000 to 1234		
Enable SMS mode (Default mode)	700****	7000000
Remarks: This command is used for turn on sms mode		
Presetting by SMS for GPRS tracking (*Ensure that your SIM card supports GPRS connection prior to setting)*		
Enable GPRS mode	710****	7100000
The command to switch to GPRS mode.		
Set APN (Default:cmnet)	**Format 1:**#803#****#APN## **Format 2:**#803#****#APN# APN user name#APN password ##	#803#0000#CMNET## #803#0000# APN# APN user name#APN password ##
Remarks: (1)If no APN username and password are required, just input APN only. (2)Use format 2 if your APN requires APN user name and APN password. (3) APN is gateway to connect internet, Each country is different, please contact your SIM card provider for APN name.		
Set IP and Port (Default:0.0.0.0,0000)	#804#****#IP#port##	#804#0000#58.64.205.22#8886##
Remarks: IP is your server's IP and Port.		
Upload in preset interval when moving (Default:0,0)	#805#****#T#N##	#805#0000#60#1##

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Remarks:(1) T= Record location by interval, from 60 to 65535 in the unit of second.

(2)N= Upload Record Location Quantity Per Time, from 1-50.

(3)Upload location data interval=T*N

In this example: WT200A will send location every 60 seconds (1 minute), 1 location reports per time.

N=0, close upload data by preset interval, the gps tracker will reply ”GPRS Timer Stop”

Track on Demand-Reply with longitude, latitude, speed and date	666****	6660000

Remarks: Get the current location of the tracker, send this SMS or make a telephone call directly to the tracker and it will report its longitude and latitude by SMS with format as follows:

Data format:

Lat: Latitude Direction (+/-) Latitude Value (Accuracy for 5 after the decimal point)

Long: Longitude Direction (+/-) Longitude Value (Accuracy for 5 after the decimal point)

Speed: Speed KM/H (Accuracy for 2 after the decimal point)

Direction: Direction (Accuracy for 2 after the decimal point)

Date: Date YYYY-MM-DD

Time: Time HH：MM：SS (GMT)

BS: Base Station information

Fix: Location state (A/V)

ID: IMEI

STATE: Message state

Effective data format:

Lat: +22.50500

Long: +114.01000

Speed: 0.00KM/H

Direction: 315.00

Date: 2008-04-25

Time: 16:39:45

BS: 25ee0dff

Fix: A

ID: 353686009002030

STATE: SMS

Invalid data format:

Lat: +22.50500

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Long: +114.01000

Speed: 0.00KM/H

Direction: 315.00

Date: 2008-04-25

Time: 16:39:45

BS: 25ee0dff

Fix: V

ID: 353686009002030

STATE: SMS

Note: If in the cold start and GPS no position, it will return to the void of information:

eg: ERROR GPS GPRMC FRAME DATA

BS: 27971054”

ID: 353686009002030

STATE: SMS

Voice Monitoring	555 ****	5550000
Remarks: User your mobile phone to send this command, after set successfully, the gps tracker will call back your mobile phone automatically, then you can hear the surrounded voice.		
Track by Interval on SMS mode (Default:0)	4XX****	4300000
Remarks: To set interval for automatic timed report. XX is the interval in minute. If XX=00 to turn off tracking by time. In this example, the tracker will send location data back to your mobile phone every 30 minutes.		
Set Single Geo-fence Alarm:	#751#Radius(Meter) #Interval(Minute)#Latitude#longitude #****##	#751#500#2#22.5442N#113.91E#0000##

Remarks: Radius: in the unit of 100 meters.

Interval: in the unit of 1 minute

Example:

You can send sms 6660000 to get the present location(latitude ,longitude), and use it as central point.

Then send command to set geo-fence:

Example: #751#500#2#22.5442N#113.91E#0000##

GPS Tracker will reply “SET AND OPEN GEOFENCE OK”.

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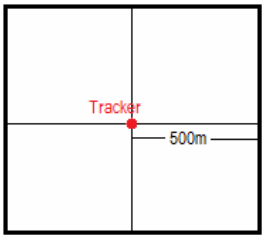
Then every time when GPS tracker will check the present location, and compare with the central point every 2 minute, when the gps tracker is in/out of the the geo-fence area, it will send sms alert to the authorization number you set.



Read All Parameters	*RCONF#	*RCONF#

Remarks: This is the command to read all the present parameters including sms/gprs mode,interval,ip,port.etc.

Information explain:

ID: (IMEI Number)

MOD: SMS P2P(SMS mode) /SMS SC(SMS platform mode)/GPRS(GPRS mode)

ST: 0(Track by Preset Interval on SMS mode)

TN: (Receiving SMS Track by Preset Interval on SMS mode mobile phone Number)

GU: V500,0000(GPRS user name and GPRS services password)

SRV: 0.0.0.0,0000(Server's IP address and port)

APN: cmnet,,(Access points name)

SAMP: 0,0(Record location by interval, Upload Record Location Quantity Per Time)

U1: Number1

U2: Number2

U3: Number3

UP: 0000 (GPS Tracker user Password)

TIME ZONE: Western 00(Time Zone)

Reset to default settings:	Press and hold SOS button, then press Power key for 3 seconds, GPS watch will back to factory.

Remarks: Return to the default settings.

List of default state:

Parameter	Default State
Working Mode	SMS P2P
Pre-set phone numbers	Null
GPS Tracker user Password	0000
GPS	ON
Send regularly location information	OFF
The number of returned base station	1
Press SOS button to call out	ON
GPRS services password	0000

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GPRS services user name	V500
APN	cmnet
Server's IP address and port	0.0.0.0 0000

5. Track by 800D web based tracking software

5.1. Enable GPRS

Send the SMS to the tracker as following format:

	Command	Remark
Command format:	710****	**** is the default password. Default:0000
For example:	7100000	710 : Command code 0000: password, default 0000

5.2. Set APN

Send the SMS to the tracker as following format

	Command	Remark
Command format:	**Format 1:**#803#****#APN## **Format 2:**#803#****#APN#APN user name#APN password ##	**** is the default password. Default:0000 Use format 2 if your APN requires APN user name and APN password.
For example:	#803#0000#CMNET##	803 : Command code 0000: password, default 0000 CMNET: APN, is gateway to connect internet, Each country is different, please contact your SIM card provider for APN name.

5.3.Set IP and Port

Send the SMS to the tracker as following format:

	Command	Remark
Command format:	#804#****#IP#port##	**** is the default password. Default:0000
For example:	#804#0000#58.64.205.22#8886##	804 : Command code 0000: password, default 0000 **58.64.205.22** 800D Platform server IP **8886** 800D Platform server software Port

5.4.Upload data in preset time when moving

Send the SMS to the tracker as following format:

	Command	Remark
Command format:	#805#****#T#N##	**** is the default password. Default:0000 (1) T= Record location by interval, from 10 to 65535 in the unit of second.

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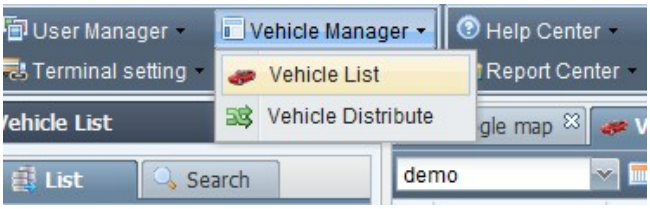
		(2)N= Upload Record Location Quantity Per Time, from 1-50. (3)Upload location data interval=T*N N=0, close upload data by preset interval, the gps tracker will reply ”GPRS Timer Stop”
For example:	#805#0000#60#1##	805 : Command code 0000: password, default 0000 In this example: WT200A will send location every 60 seconds (1 minute), 1 location reports per time.

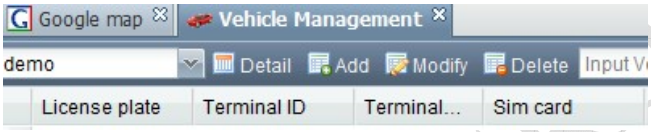
5.5. Please go to http://www.igpstracking.net/

Enter the user name and password we provided.

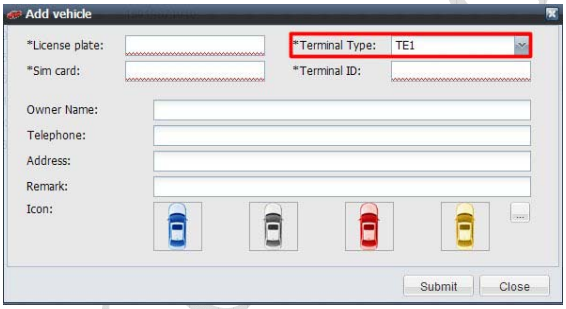
After log in, please go to “Vehicle Manager-Vehicle List”



You will see the below window



Please click “Add” button, you will see the below window:



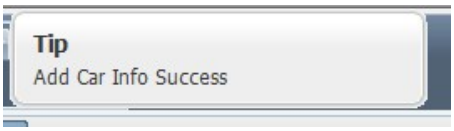
License Plate: Define by yourself; you can enter A-Z number or Numeric

800D Terminal Type: Choose” Any one ”

SIM card: the SIM card phone number you put in WT200A.

Terminal ID: On the WT200A, you can find the a white label writes “ Terminal ID". Terminal ID is cefd7fdafca97dcf here.

Click "Submit", and then you add the car successfully on the software 800d



Attention: For 800D GPS Software, "Auto update" must be checked, then the GPS tracker will update location automatically on map.Like below picture:

6.Troubleshooting

Problem: Unit will not turn on	
Possible Cause:	**Resolution:**
Wiring was not connected properly	Check and make sure wiring connection is in order.
Battery needs charging	Recharge battery
Problem: Unit will not respond to SMS	
Possible Cause:	**Resolution:**
GSM antenna was not installed properly	Make WT200A connected to GSM network.
GSM Network is slow	Some GSM networks slow down during peak time or when they have equipment problems.
Unit is sleeping	Cancel sleeping mode
Wrong password in your SMS or wrong SMS format	Write correct password or SMS format
The SIM in WT200A has run out of credit	Replace or top up the SIM card
No SIM card	Insert a working SIM card. Check in phone that the SIM can send SMS message.
SIM card has expired	Check in phone that the SIM can send SMS message. Replace SIM card if needed.
SIM has PIN code set	Remove PIN code by inserting SIM in you phone and deleting the code.
SIM is warped or damaged	Inspect SIM, clean the contacts. If re-inserting does not help try another to see if it will work.
Roaming not enabled	If you are in a different country your SIM account must have roaming enabled.
Error connecting GSM antenna	Make sure the GSM antenna is connected to the GSM interface.
Problem: SMS received starts with 'Last…'	
Possible Cause:	**Resolution:**
Unit does not have clear view of the sky	Move the antenna of the unit to a location where the sky is visible.
WT200A is in an inner place	Wait for the target to come out
Battery is low	Recharge the unit and the GPS will start working.
Error connecting GPS antenna	Make sure the GPS antenna is connected to the GPS interface.
Problem: Unit Fails to Connect to Server via GPRS	
Possible Cause:	**Resolution:**

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SIM card in WT200A does not support GPRS function	Enable SIM card GPRS function.
GPRS function of WT200A is turned off	Turn on GPRS function of WT200A.
Incorrect IP address or PORT	Get the right IP address and PORT and reset to WT200A
GSM signal is weak	Move the unit to a location with good GSM reception.

Contacts

If you encounter any problems when using our products, and cannot solve them by yourself, please contact our technical support team by writing an E-Mail to us. We will be pleased to help you.

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